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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,642	03/20/2002	Takaya Sato	08292.045	7426
7590	01/26/2005		EXAMINER	
Apex Juris PLLC 13194 Edgewater Lane Northeast Seattle, WA 98125			NGUYEN, JIMMY T	
			ART UNIT	PAPER NUMBER
			3725	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/088,642	SATO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jimmy T Nguyen	3725	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2/10/04.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-16 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-8 and 13-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/20/02 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 10, 2004 has been entered. An action on the merits follows.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “a diameter of one of said work roll is larger than a diameter of the remaining work roll in a rolling apparatus having a pair of work rolls and a pair of backup rolls” (claim 5) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

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be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure (filed on 04/21/03) is objected to because of the following informalities:

In the background of the invention, first paragraph, line 7, both of the reference numeral "13" should be changed to --- 12 ---.

In the background of the invention, second paragraph, line 6, the reference numeral "14" should be changed to --- 13 ---.

In the background of the invention, third paragraph, line 3, the reference numeral "16" should be changed to --- 15 ---.

In the background of the invention, fourth paragraph, line 1, the reference numeral "15" should be changed to --- 14 ---.

Appropriate correction is required.

### ***Claim Objections***

Claim 5 is objected to because of the following informalities:

In claim 5, line 8, the words "said work roll" should be changed to (emphasis added) ---  
said work rolls ---.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The original specification does provide any support for a diameter of one of said work roll is larger than a diameter of the remaining work roll in a rolling apparatus having a pair of work rolls and a pair of backup rolls. The specification only discloses that a diameter of one of said work roll is larger than a diameter of the remaining work roll in a rolling apparatus having a pair of work rolls and a backup roll (see fig. 7). This is a new matter rejection.

### ***Double Patenting***

Claim 8 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 4. When two claims in an application are duplicates or else are so close in content that they both

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cover the same thing, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 3, 6 and 13 are rejected under 35 U.S.C. 102(b) as anticipated by Schnyder (US 4,480,452).**

Regarding claims 3 and 13, Schnyder discloses a rolling apparatus comprising: a pair of work rolls (2 and 3); a pair of backup rolls (7 and 8); a pressuring device (col. 4, lines 6-9 and 20-27) for pressing said backup rolls toward the work roll side. Schnyder discloses that the work rolls is rotated to feed a material therebetween (fig. 5), thus it is inherent that the apparatus comprises a drive unit for rotating the work rolls. As to the elastic material coated on the surface of the backup rolls, it is well known that an elastic coating on the surface of a roll provides the surface of the rolls with flexibility. Schnyder discloses each of the backup rolls (7, 8) is a controlled deflection roll (col. 4, lines 42-43), it is well known in the art that the controlled deflection roll is the type of roll having an elastic/flexible surface in order to regulate contact pressure or pressing action upon the work roll (col. 4, lines 5-27). Accordingly, Schnyder discloses an elastic backup roll.

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Schnyder discloses the apparatus as claimed as set forth above; therefore, the apparatus is capable of rolling and pressing an electrode structure.

Regarding claim 6, the diameter of said backup roll is larger than the diameter of the work roll (fig. 3).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 3, 6, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schnyder (US 4,480,452), over Lehmann et al. (hereinafter "Lehmann") (US 4,605,366).** In the event that the Applicant does not agree that the controlled deflection roll is the type of roll having an elastic surface, The patent to Lehmann, can be applied to show that it is old and well known in the rolling art to provide a rolling apparatus (fig. 1) with a controlled deflection backup roll (29) having an elastic surface (31) (col. 4, line 2) in order to regulate contact pressure or pressing action upon a work roll (2) (col. 3, line 64- col. 4, line 21). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made for Schnyder's controlled deflection back up roll to be an elastic surface back up roll, as taught by Lehmann, in order to regulate contact pressure or pressing action upon the work roll.

**Claims 4, 7, 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schnyder (US 4,480,452), in view of Frischknecht et al. (hereinafter "Frischknecht") (US 4,649,986).** Schnyder discloses the invention substantially as claimed as set for above. Schnyder also teaches housings having an axial receive of each of said rolls inside (see figs. 4 and 6). Schnyder does not disclose a spacer positioned between the housings. However, the patent to Frischknecht teaches that it is old and well known in the rolling art, to provide a rolling apparatus with a spacer between two roll housings in order to alter/adjust the size of the gap between the rolls (col. 1, lines 14-23). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Schnyder with a spacer between roll housings, as taught by Frischknecht, in order to alter/adjust the size of the gap between the rolls.

**Claims 5, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schnyder (US 4,480,452), in view of Worthington (US 2,139,872).**

Schnyder discloses the invention substantially as claimed as set for above except for the specific diameter of the work rolls as claimed. However, the patent to Worthington teaches that it is old and well known in the rolling art, to provide a rolling apparatus (fig. 2) having a pair of work rolls (17, 21) for compress a material (25) therebetween, wherein one (17) of the work rolls having a larger diameter than the other work roll (21), and work roll with the smaller diameter is positioned between a back up roll and the work roll with the larger diameter (fig. 7).

Worthington teaches this roll arrangement in order to obtain an improvement in the physical property of the material (col. 2, lines 26-32). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute Schnyder's work



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rolls with a specific pair of work rolls, as taught by Worthington, in order to obtain an improvement in the physical property of the material.

### ***Response to Arguments***

Applicant's arguments filed on February 10, 2004 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 4,936,207 discloses a rolling apparatus having a pair of back up rolls and a pair of work rolls, wherein the back up rolls comprises a flexible/deflection surface.

US 3,861,188 discloses a rolling apparatus having a pair of back up rolls and a pair of work rolls, wherein the diameter of one of the work rolls is larger than the diameter of the other work roll.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy T Nguyen whose telephone number is (571) 272-4520. The examiner can normally be reached on Mon-Thur 8:00am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on (571) 272- 4419. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JTNguyen  
January 18, 2005



DERRIS H. BANKS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700